



CML2: Performing an In-Place Upgrade

A Step-by-Step Guide written by Luke Snell





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Document Information

Document Title	CML2: Performing an In-Place Upgrade
Brief Description	This document details how to perform an in-place upgrade for a CML2 Personal installation.
Create Date	01.01.21
Author	Luke Snell
Version	1.0

Revision History

Date	Version	Revised by	Revision Notes
03.01.21	1.0	Luke Snell	Initial Public Release



Disclaimer

Please read this section carefully prior to utilising this document.

This document is an unofficial resource that has been created to detail how Cisco Modeling Labs 2 (“CML2”) can be updated to the latest version within a non-production environment. The author recommends planning your production upgrade of CML2 by consulting official Cisco documentation and resources (e.g. Cisco TAC).

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Pre-Requisites

The following pre-requisites must be met before commencing with this guide:

- An installed and licensed copy of Cisco Modeling Labs 2 ("CML2")
- Familiarity with the administration of CML2 and a hypervisor tool (e.g.: VMware, KVM)

Downloading and Verifying CML2 Upgrade Software

Section Purpose

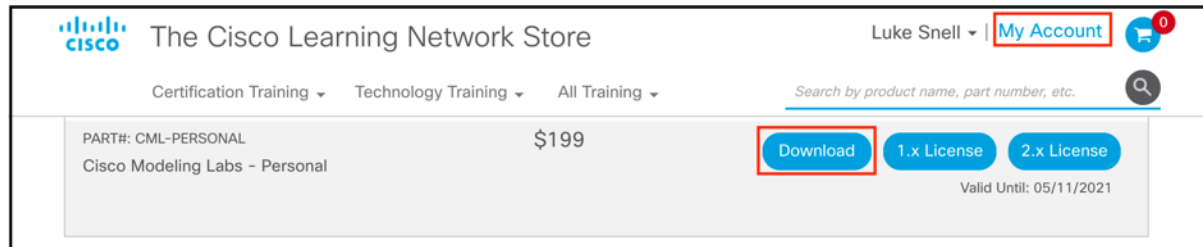
Outlines how to download and verify the CML2 upgrade software.

Notes

This section can be skipped if you already possess the latest upgrade RPM file.

Step 1: In your web browser navigate and log in to the [Cisco Learning Network Store](#) and click on the `My Account` link.

In your purchase history, locate `Cisco Modeling Labs - Personal` and then click `Download`. You will be taken to the `Software Download` web page for CML2.



Software Download

Expand All
Collapse All

Latest Release

- CML-Personal 2.1.1
- VIRL 1.6.67
- CML-Personal 2.0

All Release

- 2.1
- CML-Personal 2.1.1
- CML-Personal 2.1**
- 2.0
- 1

Release CML-Personal 2.1

[Related Links and Documentation](#)
[Release Notes for CML-Personal 2.1](#)
[Cisco Modeling Labs 2.1 Documentation](#)

File Information	Release Date	Size	
Cisco Modeling Labs Reference platform ISO File (November 2020). This is a required file for new installations. refplat_p-20201110-1-fcs.iso	24-Nov-2020	6844.44 MB	
Cisco Modeling Labs ? Personal 2.1 Server. This image is for deployment on VMware. For Bare Metal Installation use the cml2_p_controller-2.1.0-17.el8.x86_64-8.iso file. Supported Hypervisors can be found in the Admin Guide. cml2_p_controller-2.1.0-17.el8.x86_64-129.ova	28-Oct-2020	799.71 MB	
Cisco Modeling Labs - Personal 2.1 Server. This image is for bare metal deployment. For VMware installation use the cml2_p_controller-2.1.0-17.el8.x86_64-129.ova file. cml2_p_controller-2.1.0-17.el8.x86_64-8.iso	28-Oct-2020	2100.00 MB	
Cisco Modeling Labs 2.1 Server - Personal (Upgrade). This file is used to upgrade CML 2.0 & 2.0.1 installations to CML 2.1. Please follow the instructions in the CML 2.1 release notes & installation guide to upgrade a CML server. cml2_p_controller-2.1.0-17.el8.x86_64.rpm	28-Oct-2020	145.04 MB	

×

Cisco's End User Software License Agreement

In order to download software, Please confirm that you have read and agree to be bound by the terms of the [Cisco End User License Agreement](#) and any [Supplemental Terms](#), if applicable.

Cancel

Accept License Agreement

Step 4: Using your mouse, hover over the upgrade that you just downloaded. A details window will appear. Click the clipboard icon to copy the MD5 Checksum of the file.

Details

Description :

Cisco Modeling Labs 2.1.1 Server - Personal (Upgrade). This file is used to upgrade CML 2.1 installations to CML 2.1.1. Please follow the instructions in the CML 2.1.1 release notes & installation guide to upgrade a CML server.

Release :

CML-Personal 2.1.1

Release Date :

24-Nov-2020


FileName :

cml2_p_controller-2.1.1-19.el8.x86_64.rpm


Size :

145.04 MB (152088368 bytes)

MD5 Checksum :

9c8c022b335c442ae053713ddbefe9ed 

SHA512 Checksum :

ced7f6c5286da8da417e4879ee6bd7e4 ... 

[Security Advisory](#)
[Field Notices](#)

Step 5: Verify the MD5 checksum of the downloaded file against the one copied in Step 4 by executing the below commands in terminal/PowerShell respectively:

- Linux / MAC: `md5 <file_name>`

```
md5 cml2_p_controller-2.1.0-17.el8.x86_64.rpm
MD5 (cml2_p_controller-2.1.0-17.el8.x86_64.rpm) = 46505483d0d862b321b751d62691370a
```

- Windows: `get-filehash -Algorithm MD5 <file_name>`

```
PS C:\Users\...\Downloads> get-filehash -Algorithm MD5 .\cml2_p_controller-2.1.0-17.el8.x86_64.rpm
Algorithm Hash Path
-----
MD5 46505483D0D862B321B751D62691370A C:\Users\...\Downloads\cml2...
```

You are now ready to perform an in-place upgrade for CML2, please proceed to the next section.

Performing an In-Place Upgrade for CML2

Section Purpose

Outlines how to download and verify the CML2 upgrade software.

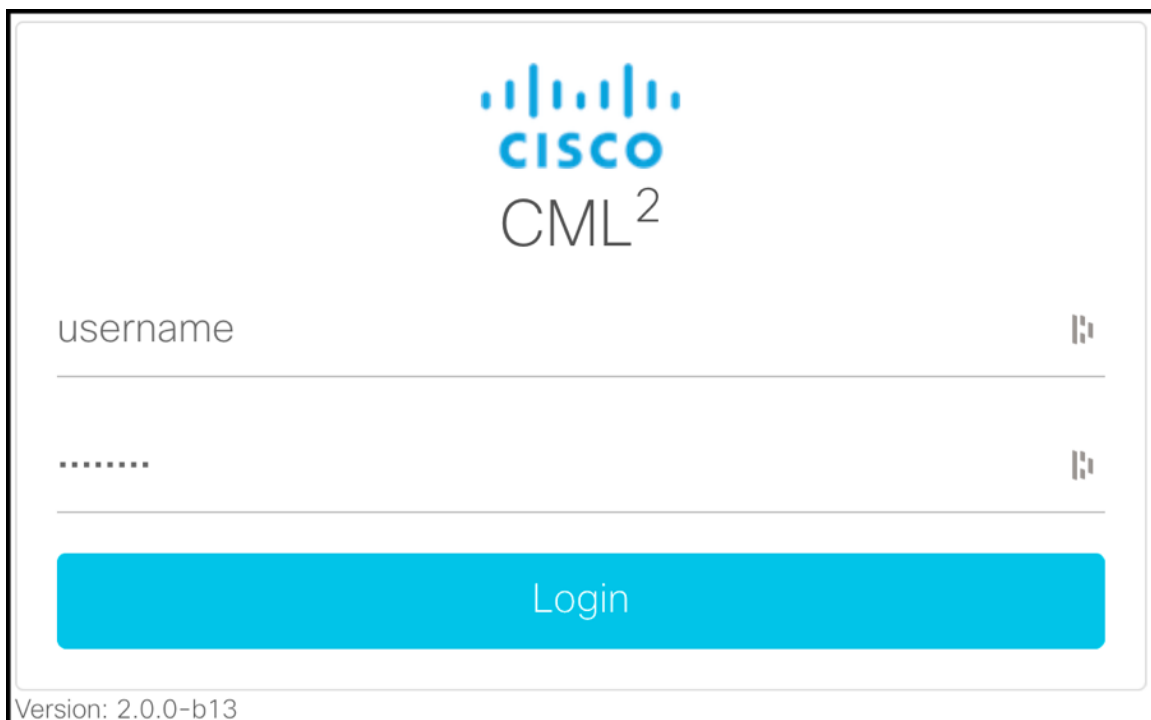
Section Pre-Requisites

This section can be skipped if you already possess the latest upgrade RPM file.

IMPORTANT NOTES

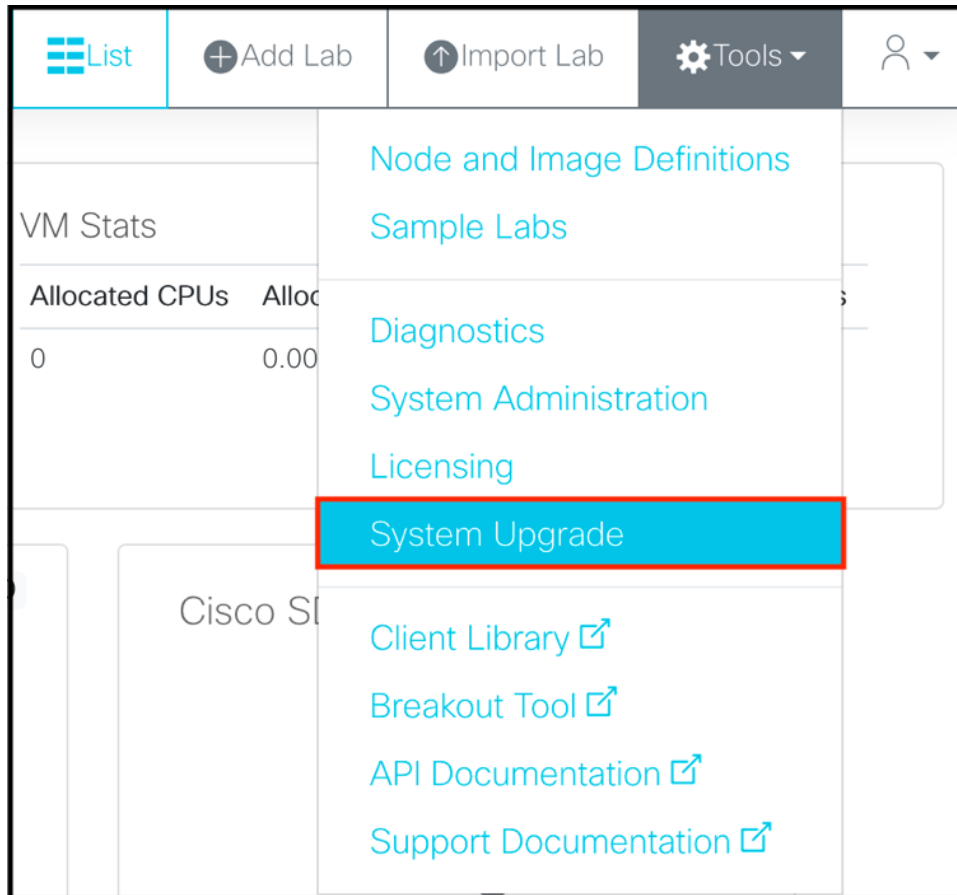
1. Always read the release notes and security advisories associated Cisco software products prior to downloading.
2. Consider deregistering your product licence in CML2 prior to performing a major release upgrade. This will simplify the process of performing a clean install and relicensing the product should the upgrade catastrophically fail.
3. If you encounter difficulties launching nodes then consider downloading the latest reference platform ISO images and re-attempting.

Step 1: Start your CML2 virtual machine and then log in to the web interface

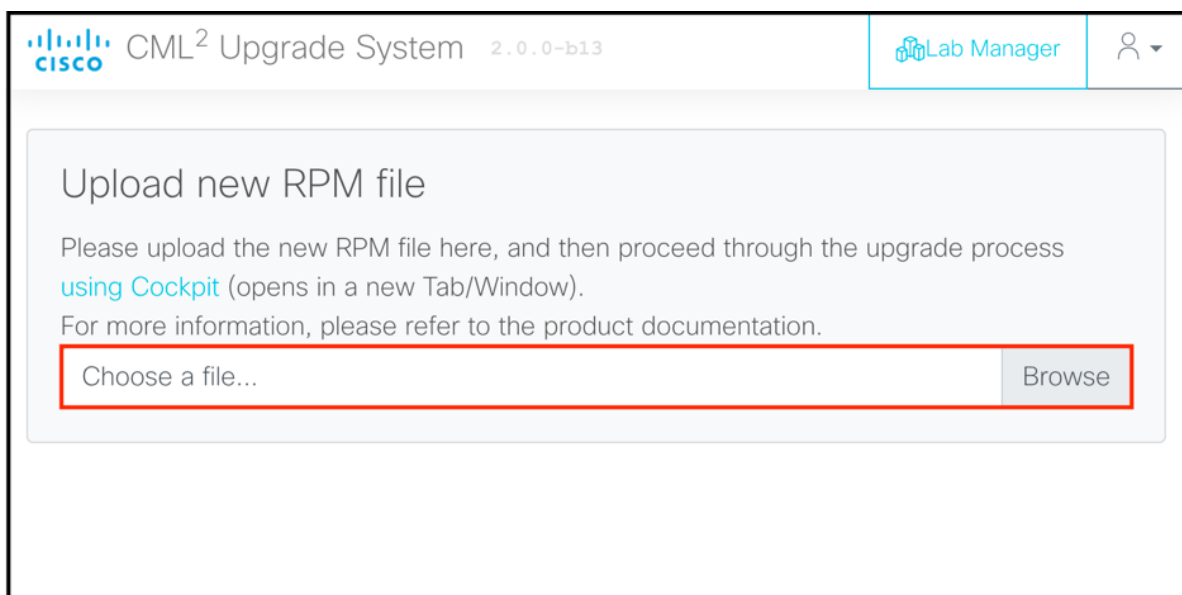


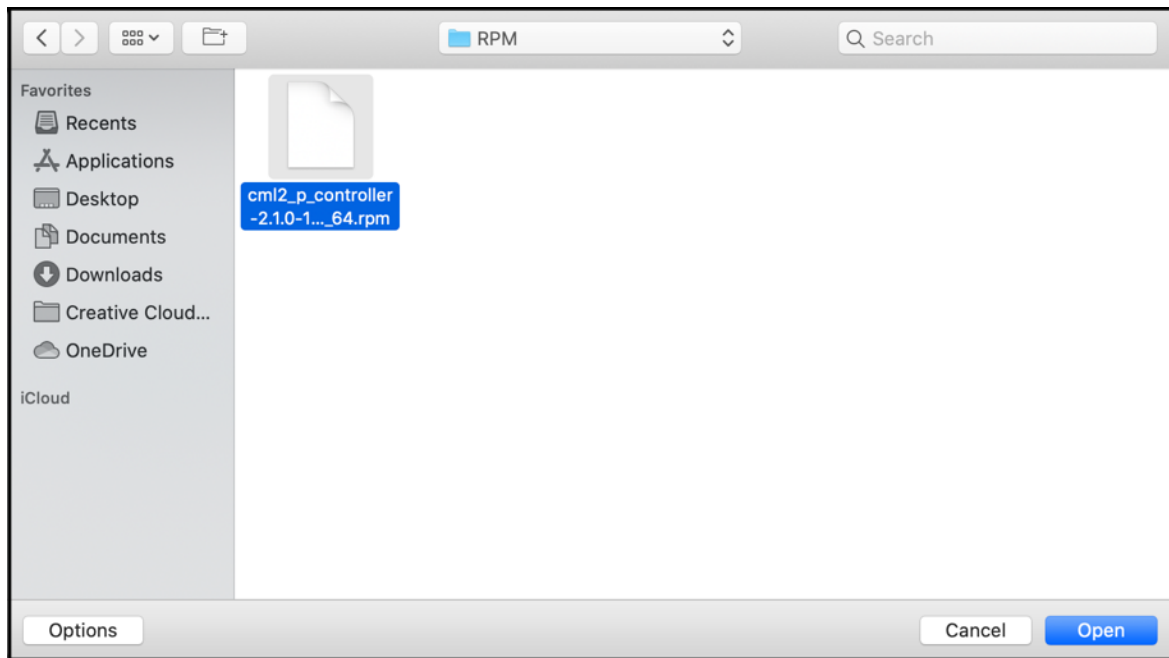
The screenshot shows the Cisco CML2 login web interface. At the top center is the Cisco logo (a stylized bridge) above the text "CISCO" and "CML²". Below the logo are two input fields: the first is labeled "username" and the second is masked with dots. To the right of each input field is a small icon of a person. Below these fields is a large blue button with the text "Login". At the bottom left of the interface, the text "Version: 2.0.0-b13" is displayed.

Step 2: In the top right-hand corner of the web page, hover over the **Tools** menu item and then click on **System Upgrade**.

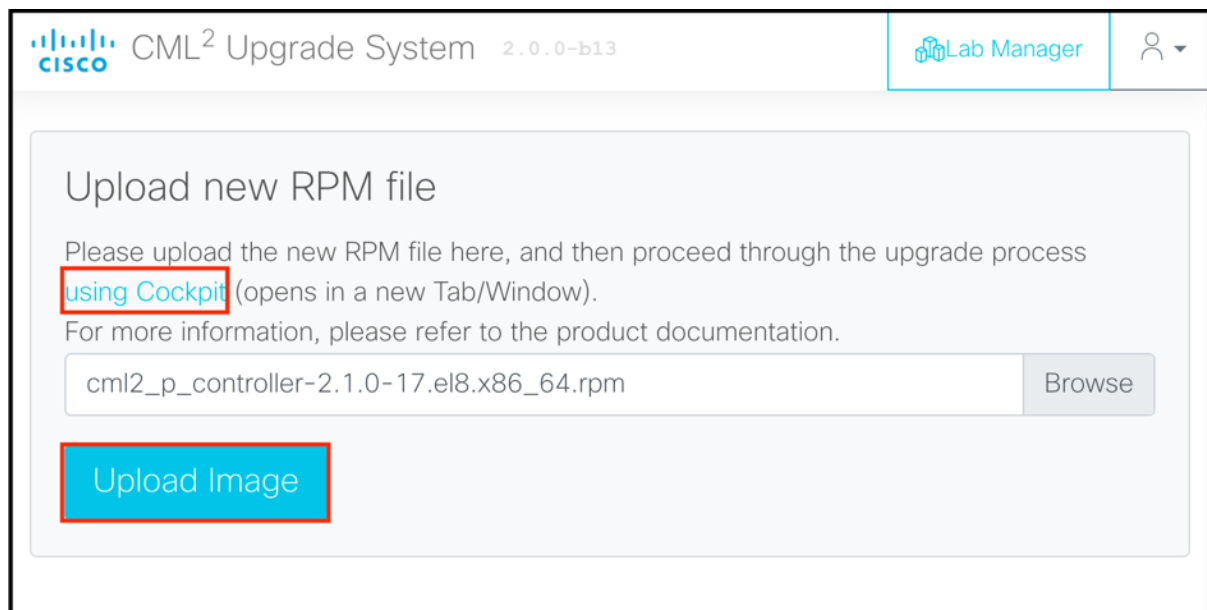


Step 3: Click on the **Browse** button to select the previously downloaded RPM file.

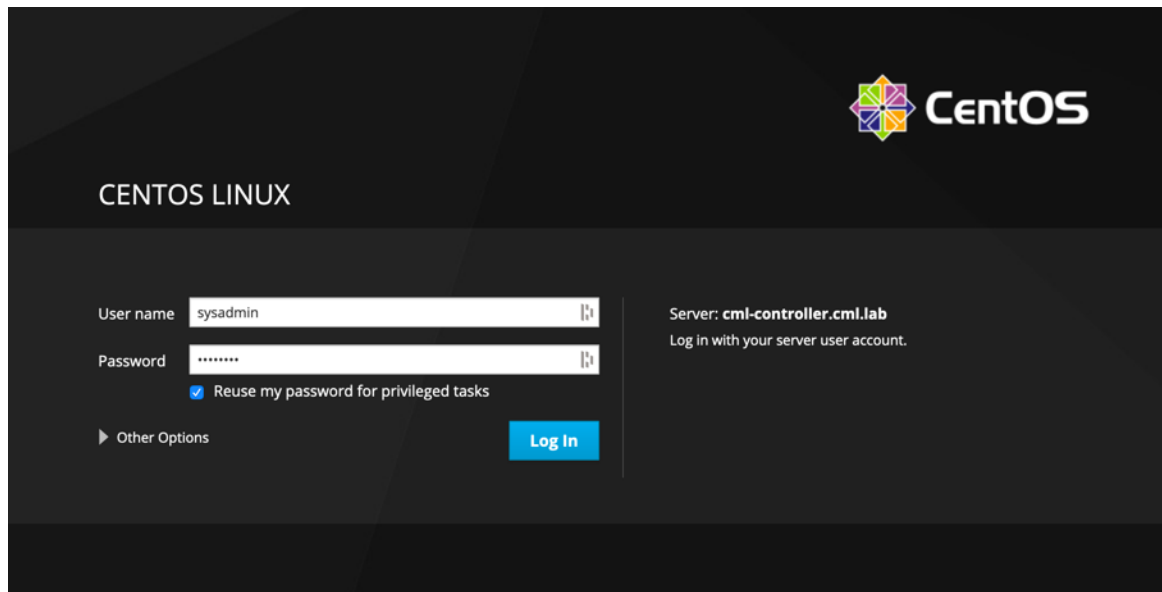




Step 4: Click on the `Upload Image` button to upload the RPM file to CML2. Once this has completed then click on the `using Cockpit` hyperlink to open Cockpit.

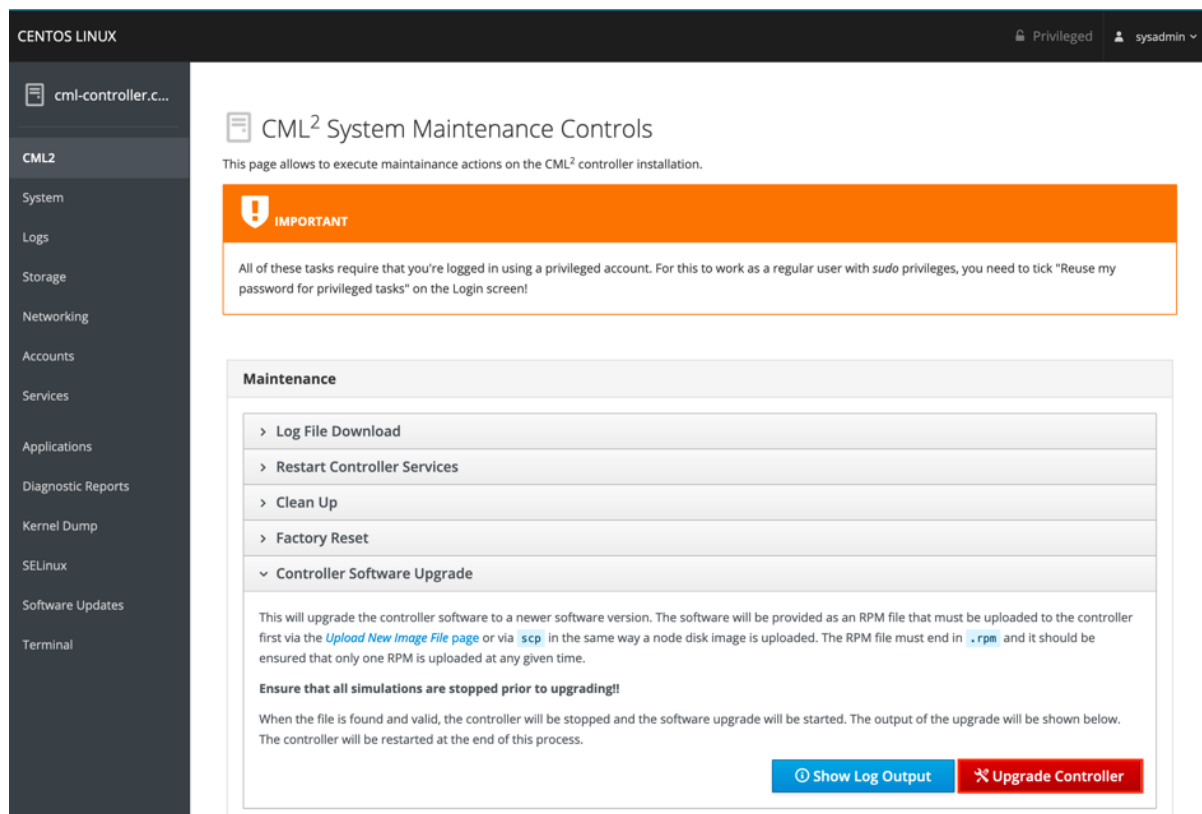


Step 5: Log in to Cockpit (aka CentOS) with your CML2 sysadmin credentials. Be sure to check the box `Reuse my password for privileged tasks`.

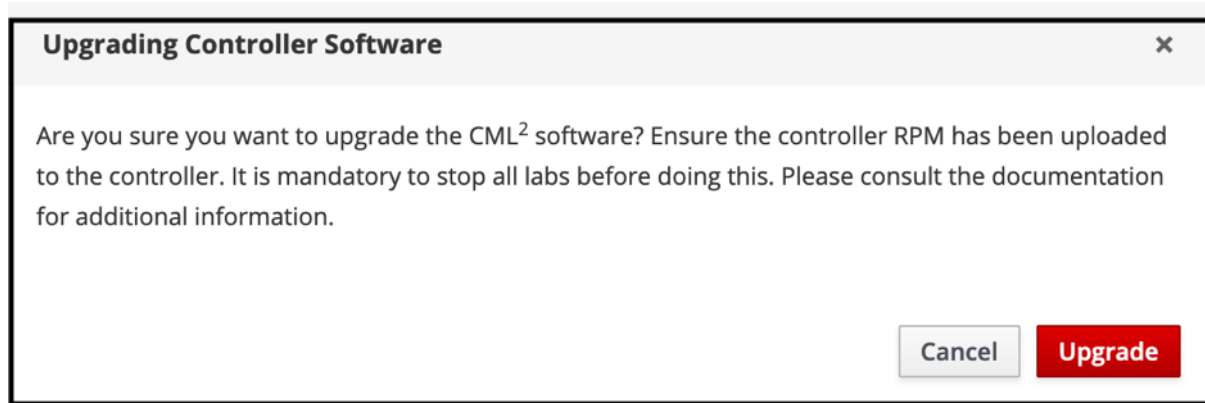


The image shows the CentOS Linux login interface. At the top right is the CentOS logo. Below it, the text "CENTOS LINUX" is displayed. The login form includes fields for "User name" (containing "sysadmin") and "Password" (masked with dots). A checkbox labeled "Reuse my password for privileged tasks" is checked. To the right of the form, it says "Server: cml-controller.cml.lab" and "Log in with your server user account." A blue "Log In" button is at the bottom right of the form. There is also a link for "Other Options" on the left.

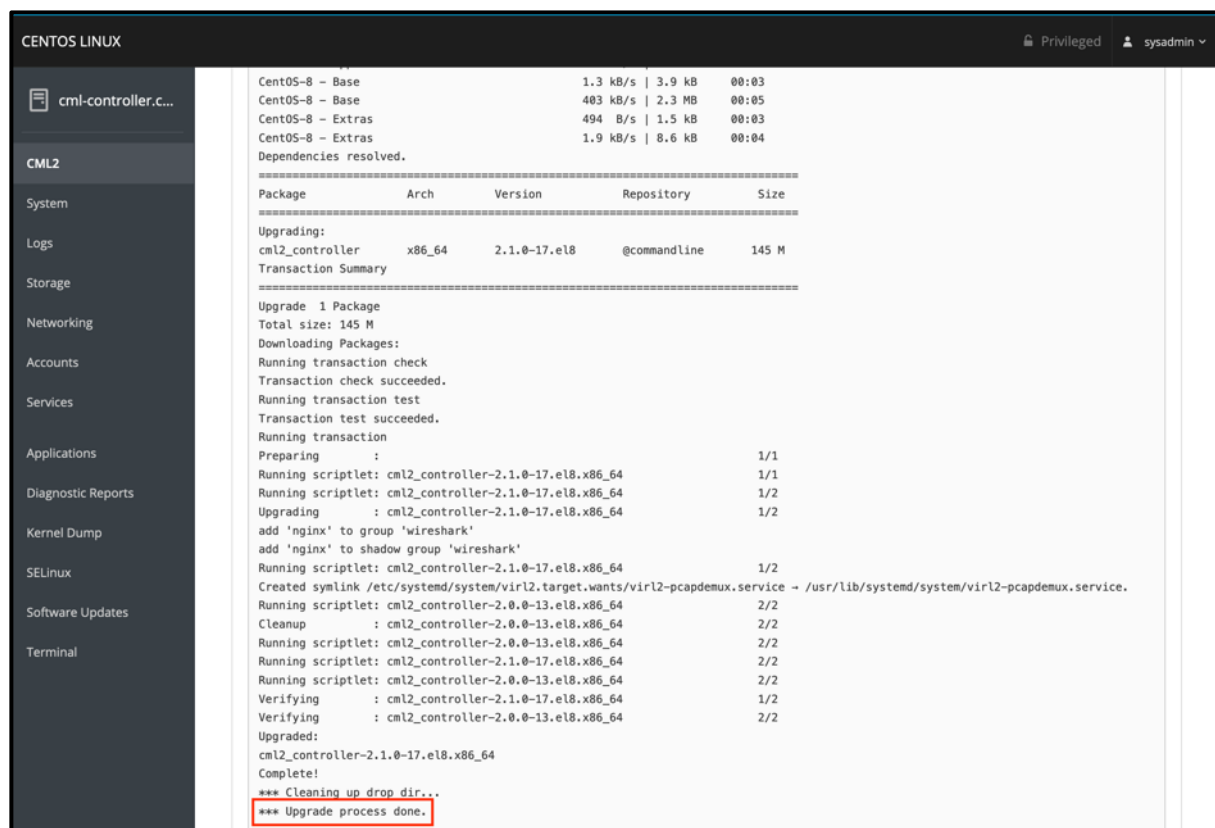
Step 6: On the main page expand the `Controller Software Upgrade` section and click `Upgrade Controller`. A popup will appear - once you have stopped ALL running labs click the `Upgrade` button to proceed. I recommend clicking the `Show Log Output` so that you can monitor the upgrade procedure.



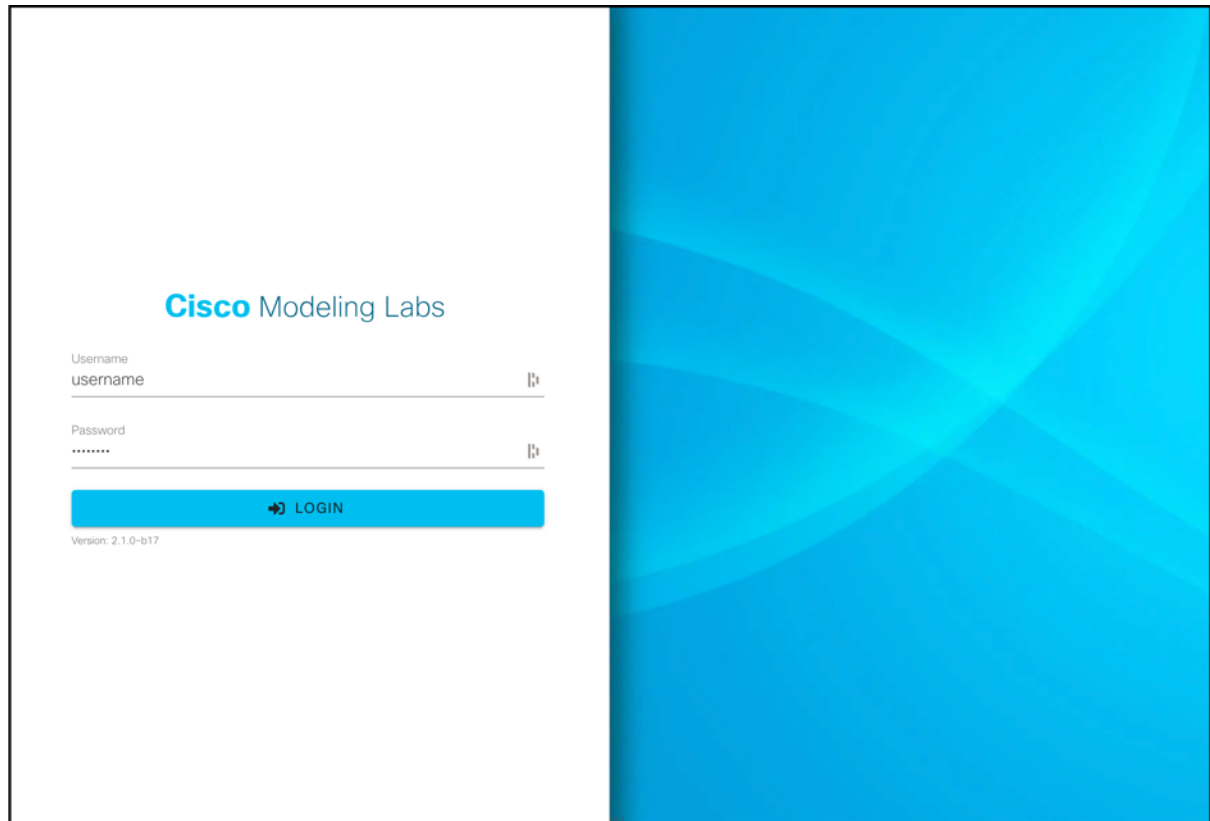
The image shows the "CML² System Maintenance Controls" page in the Cockpit interface. The top header shows "CENTOS LINUX" and "Privileged sysadmin". The left sidebar lists various system components. The main content area has a title "CML² System Maintenance Controls" and a subtitle "This page allows to execute maintenance actions on the CML² controller installation." Below this is an orange "IMPORTANT" banner with a warning icon. The banner text states: "All of these tasks require that you're logged in using a privileged account. For this to work as a regular user with `sudo` privileges, you need to tick 'Reuse my password for privileged tasks' on the Login screen!" Below the banner is a "Maintenance" section with a list of tasks: "Log File Download", "Restart Controller Services", "Clean Up", "Factory Reset", and "Controller Software Upgrade". The "Controller Software Upgrade" task is expanded, showing detailed instructions: "This will upgrade the controller software to a newer software version. The software will be provided as an RPM file that must be uploaded to the controller first via the [Upload New Image File page](#) or via `scp` in the same way a node disk image is uploaded. The RPM file must end in `.rpm` and it should be ensured that only one RPM is uploaded at any given time." It also includes a warning: "Ensure that all simulations are stopped prior to upgrading!!" and a description: "When the file is found and valid, the controller will be stopped and the software upgrade will be started. The output of the upgrade will be shown below. The controller will be restarted at the end of this process." At the bottom right of the expanded task are two buttons: "Show Log Output" (blue) and "Upgrade Controller" (red).



Step 7: Once the log output states that the upgrade process is completed, refresh the Cockpit page. If a system restart is required post-upgrade, you will be notified. Else proceed to Step 8.



Step 8: Access and log into the CML2 web interface. Ensure that the version number on this page matches the version number you intended to upgrade to.



Step 9: Verify that all CML2 labs are present and recommence labbing!

